

EXPLANATION OF PLATE VI.

<i>b.v.</i> Blood-vessel.	<i>ov.</i> Ovarian ovum in follicle.
<i>cl.</i> Cloaca.	<i>p.</i> Penis.
<i>ep.</i> Epididymis.	<i>r.</i> Rectum.
<i>f.ep.</i> Follicular epithelium.	<i>t.</i> Testis.
<i>Fl.</i> Cœlomic aperture in Müllerian duct.	<i>ts.</i> Seminiferous tubules.
<i>g.</i> Gonad.	<i>v.ef.</i> Vasa efferentia.
<i>k.</i> Kidney.	♂. Aperture of vas deferens contiguous with that of ureter.
<i>m.</i> Müllerian duct (oviduct)	♀. Aperture of Müllerian duct.
<i>n.</i> Nucleus.	<i>y.</i> Yolk.
<i>o.</i> Ovum.	

- Fig. 1.* *Tortoise A*, genitalia seen from ventral surface. Cloacal bladder removed ventrally. Left Müllerian duct and epididymis separated and slightly displaced to show kidney dorsal to them. Penis turned over dorsally to show groove. Nat. size.
- Fig. 2.* *Tortoise B*, genitalia, ventral view. Round and broad ligaments not shown (nor in *fig. 1*). Cloacal bladder cut away ventrally. Nat. size.
- Fig. 3.* Part of a longitudinal section of the left gonad of *Tortoise A*, showing an egg on the surface and the relative size of the seminiferous tubules of the rest of the gonad. $\times 12$ diameters.
- Fig. 4.* Part of a longitudinal section of the left gonad of *Tortoise A*, showing developing follicle (with ovarian ovum) wedged in between seminiferous tubules. Slightly diagrammatic. $\times 100$ diameters.

XIII.—*Reply to Mr. G. A. Boulenger.* By NILS ROSÉN.

To the "Remarks" which Mr. Boulenger in the March number of these 'Annals' has made upon my paper on snakes belonging to the Museums of Lund and Malmö, and which at first sight may seem to many to have been totally annihilating, I beg to give the following reply, which I hope will fully convince all impartial readers of the groundlessness of these "Remarks."

I will begin with Mr. Boulenger's statement that the snake I have described as a new genus under the name of *Anisodon Lilljeborgi* is identical with *Psammodynastes pulverulentus*, Boie, and first make a comparative survey of the most prominent differences between them:—

Anisodon Lilljeborgi (of which there are two specimens of exactly the same shape, one larger than the other).

(1) *Hypapophyses* present throughout the vertebral column, represented on the posterior dorsal vertebrae by a well-developed crest, projecting below the condyle.

(2) At least 13 maxillary teeth.

(3) Of the maxillary teeth the fourth and fifth enlarged.

(4) The last two maxillary teeth much enlarged and grooved.

(5) Rostral distinctly visible from above.

(6) Frontal not twice as long as broad.

(7) Temporals 2+2.

(8) Snout pointed.

(9) A dorsal series of rather large lighter spots, edged with black. Along the upper labials a white streak, edged with black.

Psammodynastes pulverulentus, Boie (according to Mr. Boulenger's description).

(1) *Hypapophyses* absent on the posterior dorsal vertebrae.

(2) 9-11 maxillary teeth.

(3) Of the maxillary teeth the third or the third and fourth much enlarged.

(4) The last maxillary tooth enlarged and grooved.

(5) Rostral scarcely visible from above.

(6) Frontal twice to twice and a half as long as broad.

(7) Temporals 2+3 (rarely 2+2).

(8) Snout short, profile truncate or somewhat turned up in the adult. (Head more distinct from neck than in *A. Lilljeborgi*.)

(9) With or without small darker and lighter spots above. A more or less distinct dark streak on each side of the head, passing through the eye.

Assuming that Mr. Boulenger's description of *P. pulverulentus* is correct, the difference between these two snakes, as shown by the above comparison, is so great that it seems strange that anybody should seriously think of uniting them. That Mr. Boulenger is, nevertheless, inclined to do so is unintelligible, all the more so because he has himself put forth the dentition as well as the hypapophyses as distinguishing characteristics of very great value for the classification of snakes, the snakes mentioned above differing widely from each other in these two respects. As to the hypapophyses, I have ('Annals,' Feb. 1905, p. 171) called attention to the fact that they are not of so much importance as Mr. Boulenger is inclined to ascribe to them, which particularly finds expression in his 'Catalogue of Snakes' concerning Colubrinae as well as Dipsadomorphinae, since he arranges the genera of these two subfamilies in two series, "according to the presence or absence of hypapophyses or hæmal processes on the posterior dorsal vertebrae" (Cat. Snakes, i. p. 170 seqq., iii. p. 27); and so I have of course not exclusively attached importance to this difference, even if, as is quite natural, I have

given it some significance with the rest. *But to Mr. Boulenger, who seems still to adhere to it, this difference should be of such importance that he ought to be very far from thinking that these two snakes are identical.* Upon examination of the specimens of *P. pulverulentus* from the Zoological Museum of Copenhagen, which have been kindly placed at my disposal, I have also found that the difference between this species and *A. Liljeborgi*, described by me, is really so great that it is quite out of the question that they are the same, as Mr. Boulenger maintains, and so I am of opinion that I have the right still to adhere to its being a *new genus*, although under another name (*Anisodontes*), as I overlooked the fact that *Anisodon* has already been applied to a *fossil mammal*. However, I shall please Mr. Boulenger with the information that the difference between them has in some degree been lessened for *him* by the observations I have made upon *P. pulverulentus*. The fact is that I have seen one specimen with well-developed hypapophyses also on the posterior dorsal vertebræ—this being quite contrary to Mr. Boulenger's own statements, so that I expect the pleasure will not be altogether unmixed to him. Yet it will be evident from what has been stated above that this has no real importance so far as this question is concerned, while, on the other hand, it tends to *confirm my opinion that the hypapophyses have not the great systematic value which Mr. Boulenger maintains in his Cat. Snakes.*

But enough on this subject! Just as strange as this is Mr. Boulenger's doubt as to the correctness of my statement that *Chrysopelea ornata* sometimes has well-developed hypapophyses also in the posterior region, *for one can hardly imagine a greater inconsistency than this—first to maintain the great importance of the hypapophyses as a systematic characteristic, then, without changing one's opinion on this point, to identify one snake having hypapophyses with another without them, and at last to doubt the statement that with the same species these apophyses are sometimes present, sometimes absent!* Or have these apophyses a systematic value for *Chrysopelea* and other *Dipsadomorphine* and *Colubrine*, but not for my *Dipsadomorphine* *Anisodon*? Add to this that Mr. Boulenger does not mention the other species—*Helicops modestus*, Gthr., *H. leopardinus*, Schleg., and *Tretanorhinus intermedius*, sp. n. (pp. 170, 171)—which I have given as a proof of the variation and comparative unimportance of this feature for classification, and I think that Mr. Boulenger's "*Remarks*" will appear to be unfounded.

Mr. Boulenger calls upon those who possess specimens of

Chrysopelea ornata to examine how the matter stands respecting the hypapophyses, and to verify *his* statement. An opportunity of complying with his request has kindly been afforded me as regards specimens belonging to the Zoological Museum of Copenhagen, and I have thereby found *my* statement perfectly verified: there were several specimens, some with, others without developed hypapophyses in the posterior region, and I hope that Mr. Boulenger too will succeed in finding a specimen having these apophyses.

That *Coluber fasciatus* should be the same as *Drymobius Boddaertii*, var. *Rappii*, Gthr., seems rather doubtful, supposing one were to keep to Mr. Boulenger's own description of it in Cat. Snakes.

Having shown Mr. Boulenger's criticism in these instances to be unjustified, I pass over his suppositions, put forward without argument, as regards the other determinations. I will only mention that I have not been "encouraged &c."

XIV.—*List of the Lizards in the Zoological Museum of Lund, with Descriptions of new Species.* By NILS ROSÉN, Zool. Inst. Lund.

[Plates VII.-IX.]

Fam. Geckonidæ.

1. *Gymnodactylus marmoratus*, Kuhl.
Java.
2. *Gymnodactylus Miliusii*, Bory.
West Australia.
3. *Phyllodactylus marmoratus*, Gray.
Australia.
4. *Ptyodactylus lobatus*, Geoffr.
Egypt.
5. *Thecadactylus rapicaudus*, Houtt.
West Indies.
6. *Hemidactylus frenatus*, D. & B.
Java.
7. *Hemidactylus Bowringii*, Gray.